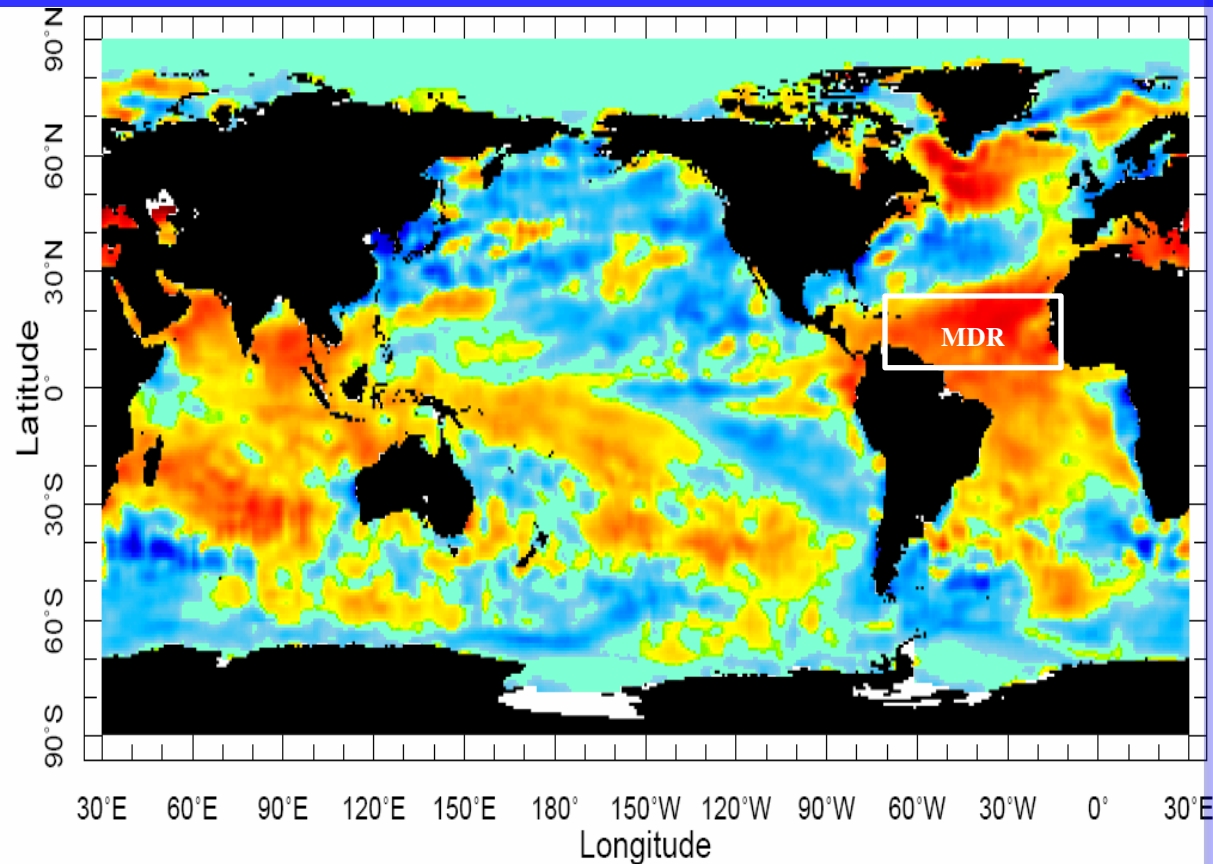


## Weekly Climate Update May 18<sup>th</sup> 2010

- In the most recent official CPC seasonal climate outlook made April 15<sup>th</sup> there is only one climate window with a shift in the climate regime predicted to vary from climatology (towards wet or dry). That one is towards drier than normal for the January-March 2011 climate window. In the March 2010 CPC Outlook there were several windows shifted towards increased chances of above normal rainfall. A new outlook is scheduled to be posted this Thursday.
- In it's new ENSO prediction made this week, CPC predicted cooler than normal equatorial Pacific sea surface temperatures but the anomalies are not large enough to fit the definition of La Nina.
- The potential for an active tropical season is currently in place. The North Tropical Atlantic SSTs are near or at record warmth and updates of the CFS predictions are continually hedging towards cooler tropical Pacific SST for later this summer. The evolution of the tropical oceans will need to be continually monitored in the upcoming months.

## Latest Weekly Global Sea Surface Temperature Anomaly



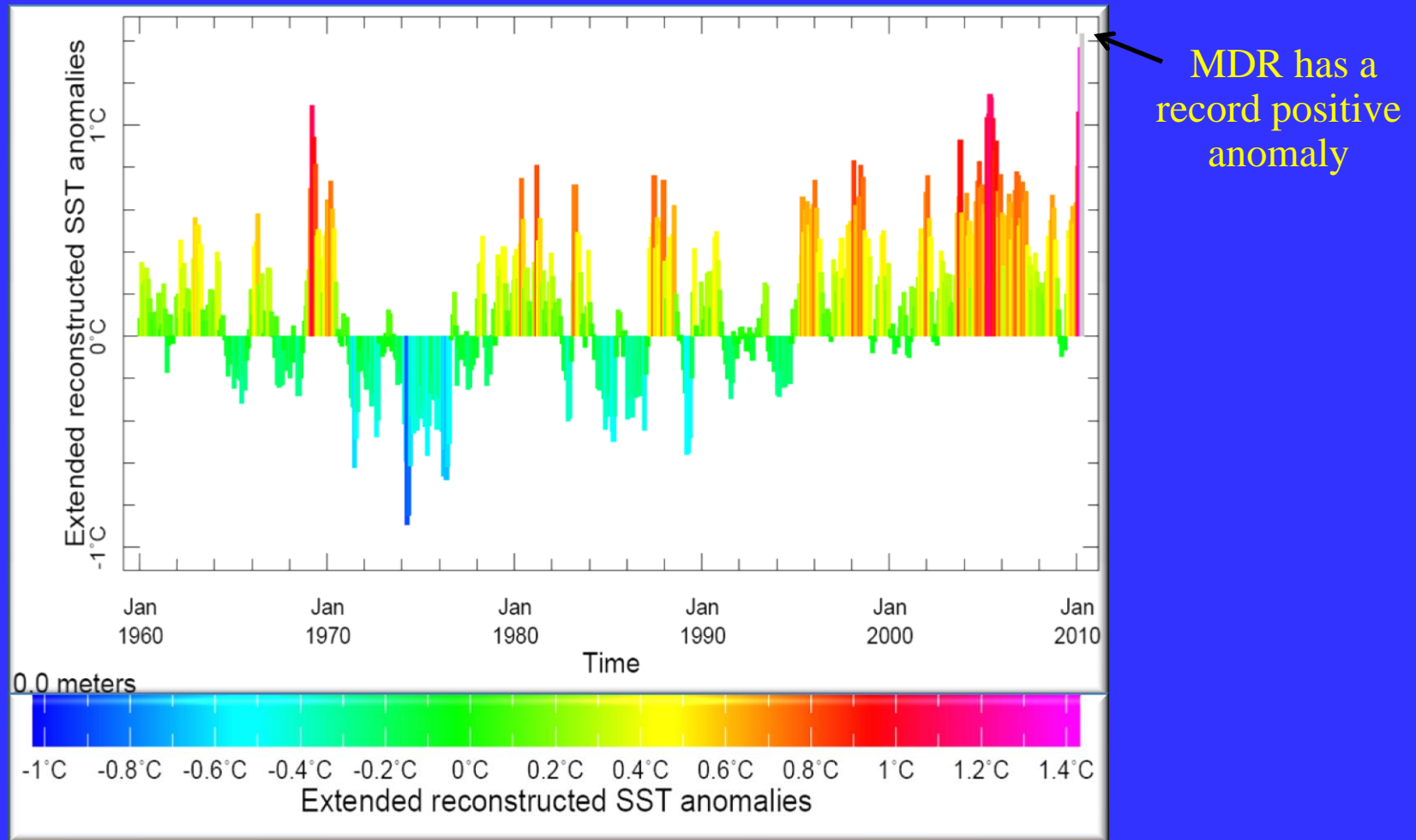
9-15 May 2010

Sea Surface Temperature Anomaly

Very Warm  
Temperatures  
in  
the  
Hurricane  
Main  
Development  
Region  
(MDR)  
of Atlantic  
Hurricanes  
[5N-20N].  
is very similar  
to 1969.

The warm water in the north tropical Atlantic, if it persists into the peak of the hurricane season, creates climatologic conditions that favors a more active tropical season overall.

# Tropical Atlantic Ocean Sea Surface Temperature Anomaly within the Hurricane Main Development Region (MDR)





# Niño Region SST Departures (°C) Recent Evolution

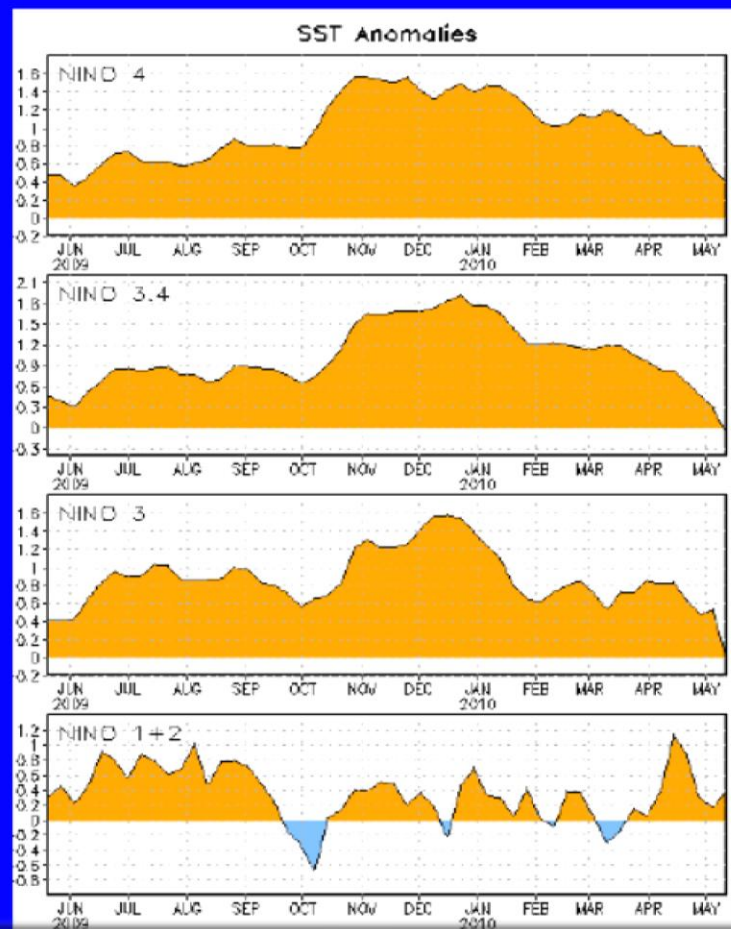
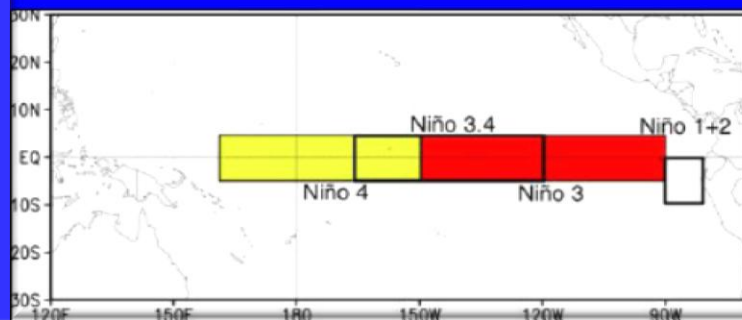
The latest weekly SST departures are:

Niño 4                      0.4°C

Niño 3.4                  -0.1°C

Niño 3                     0.0°C

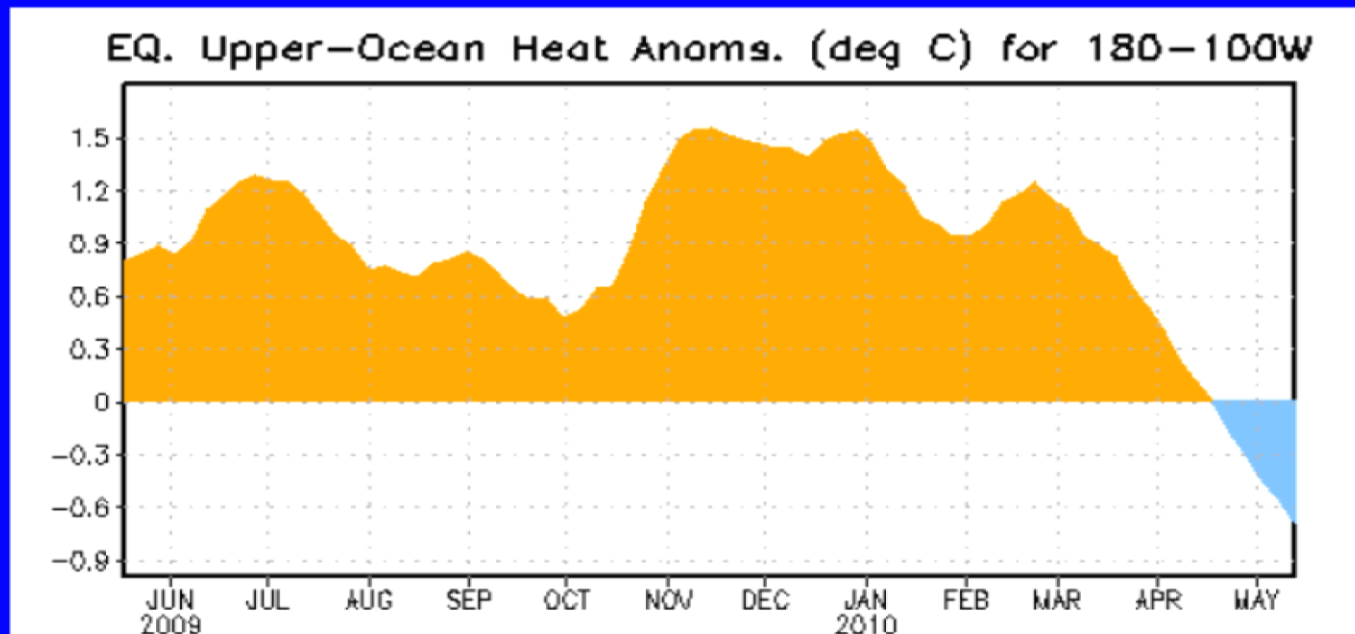
Niño 1+2                 0.4°C



Two of four equatorial Pacific sea surface temperature indices near zero.



## Central & Eastern Pacific Upper-Ocean (0-300 m) Weekly Heat Content Anomalies



Since April 2009, the upper-ocean heat content has been above average across the eastern half of the equatorial Pacific Ocean. Sharp increases in heat content during June and October 2009 coincide with the development and subsequent strengthening of El Niño, respectively. Since late February 2010, the heat content anomalies have steadily decreased and become negative.

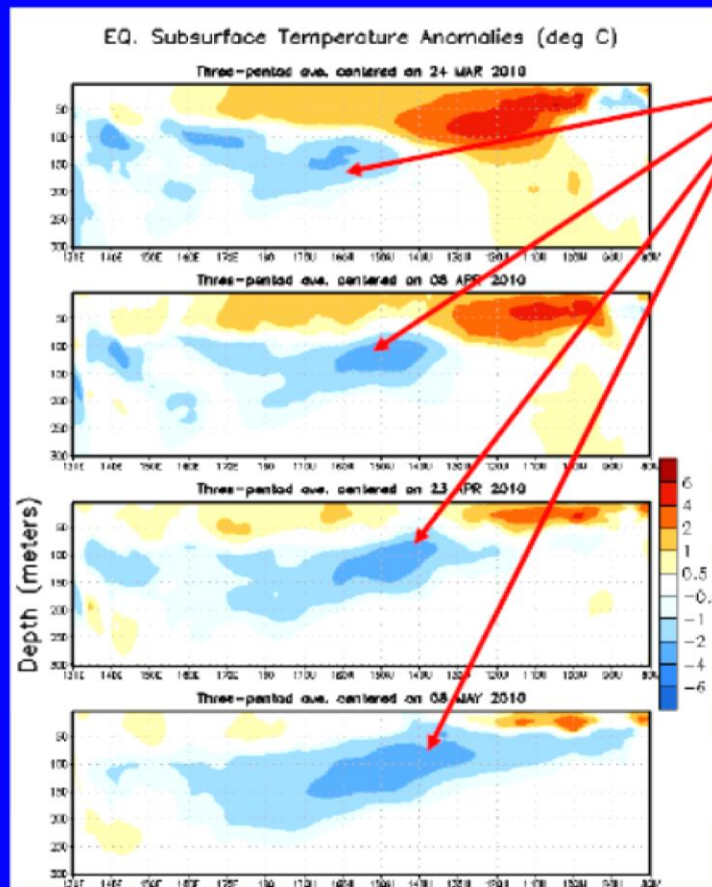
The rate of decline of the upper ocean heat content along the equatorial Pacific continues at a rapid pace. As seen on the last graph this decline in the heat content is beginning to reach the sea surface temperature anomalies. Negative upper ocean heat content increases the possibility for the development of La Nina conditions.





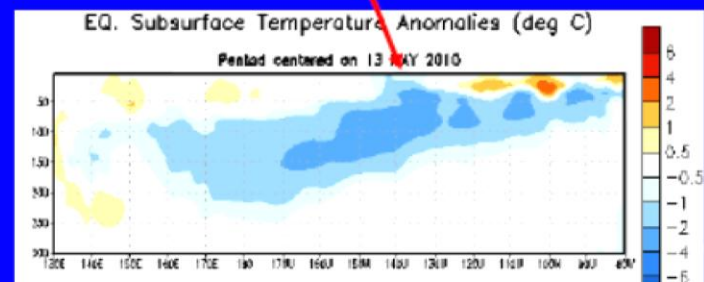
# Sub-Surface Temperature Departures (°C) in the Equatorial Pacific

Time



Longitude

- Since early March 2010, negative subsurface temperature anomalies have shifted eastward in association with the upwelling phase of an oceanic Kelvin wave
- Recently, below-average subsurface temperatures have extended to the surface in the east-central Pacific Ocean.



Most recent pentad analysis

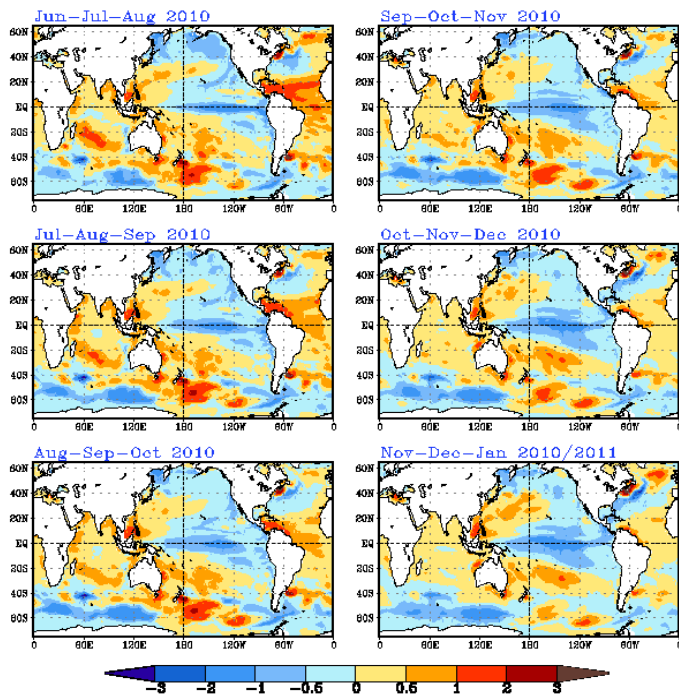
# Climate Forecast System El Nino Ensemble



NWS/NCEP

Last update: Mon May 17 2010  
Initial conditions: 6May2010-15May2010

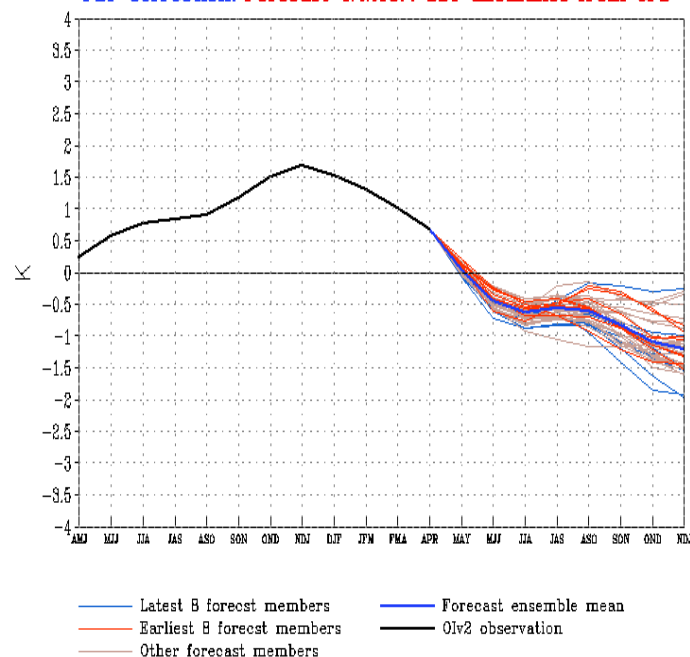
CFS seasonal SST forecast (K)



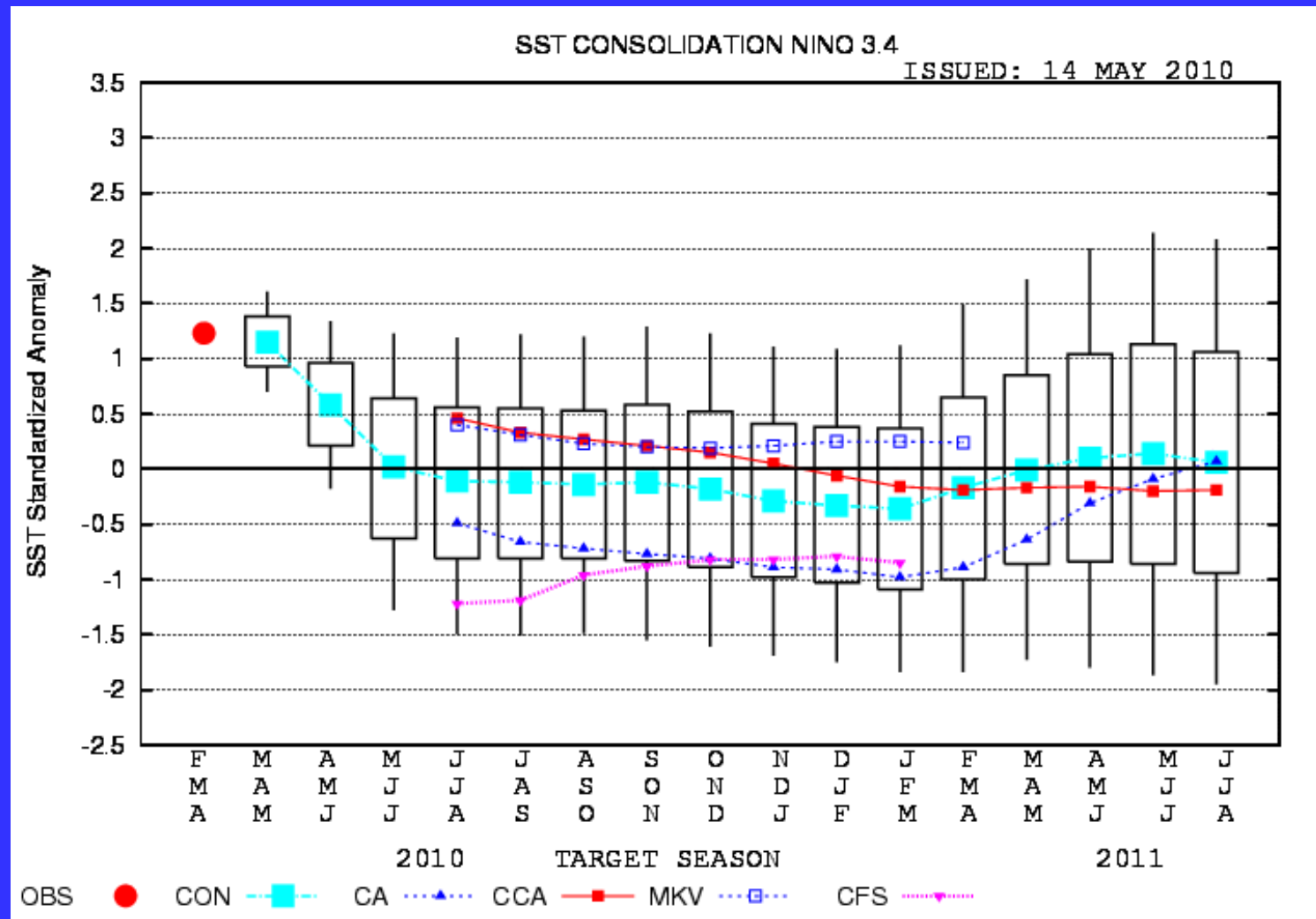
NWS/NCEP

Last update: Mon May 17 2010  
Initial conditions: 7May2010-16May2010

PDF correction: Forecast Nino3.4 SST anomalies from CFS



# Official El Nino-Southern Oscillation Forecasts released

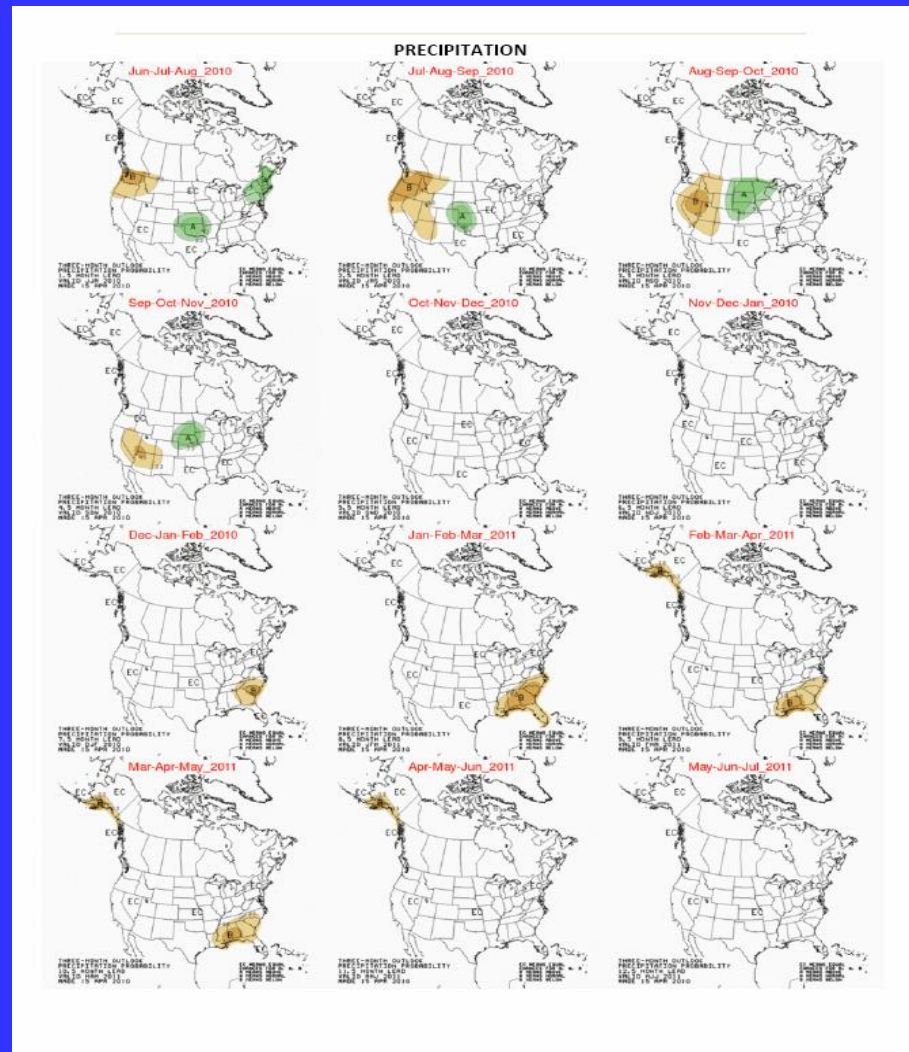


Current official consolidated outlook [ CON ] predicts neutral conditions during the next 12- months



# Three Month Overlapping Seasonal Outlook

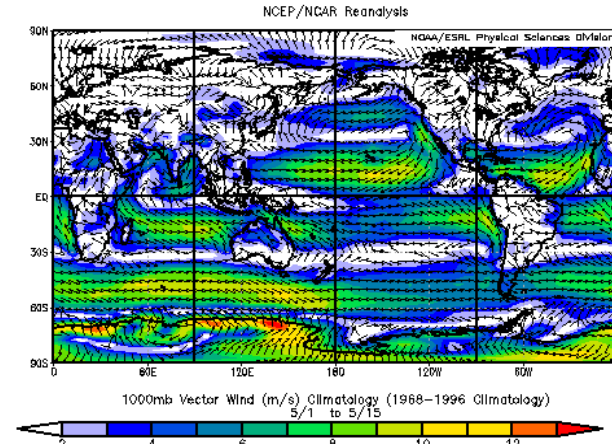
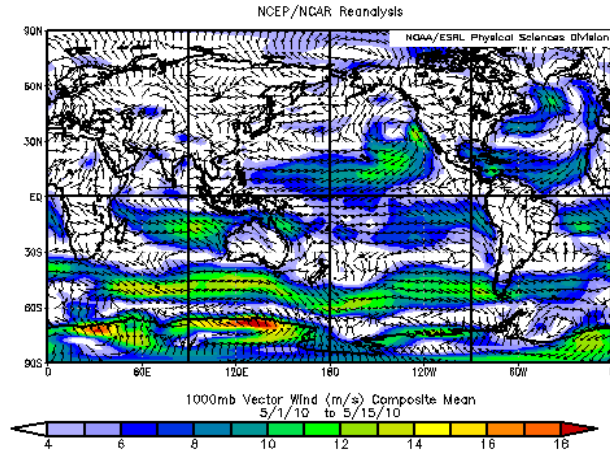
## Climate Prediction Center



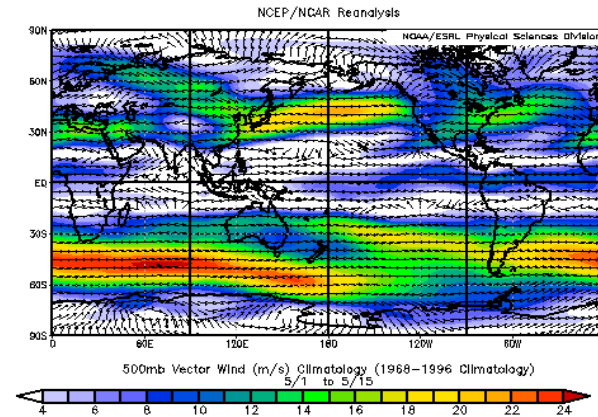
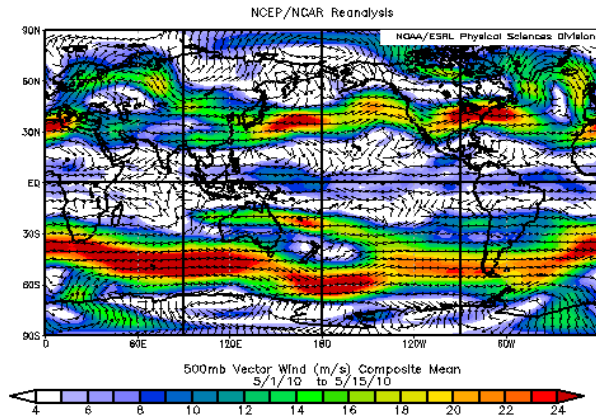
## May 1<sup>st</sup> -15 Actual Vector Wind

## May 1<sup>st</sup> -15<sup>th</sup> Climatologic Vector Wind

Surface  
(1000 mb)



Upper Atmosphere  
(500 mb)



Low latitude surface easterly winds less than normal in the Atlantic Basin.  
This explains the positive in the tropical oceans.

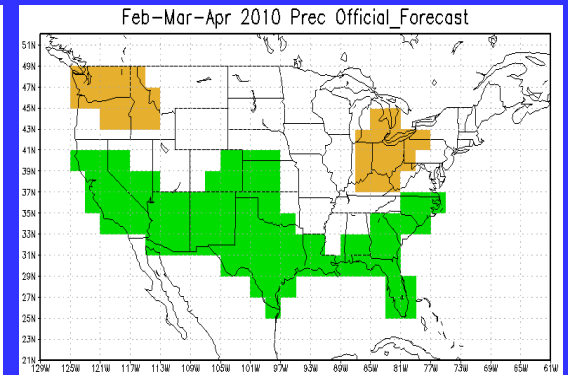
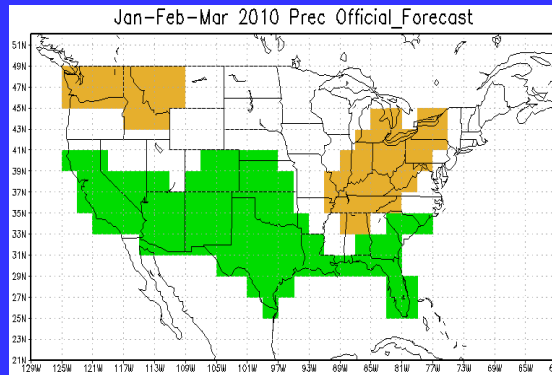
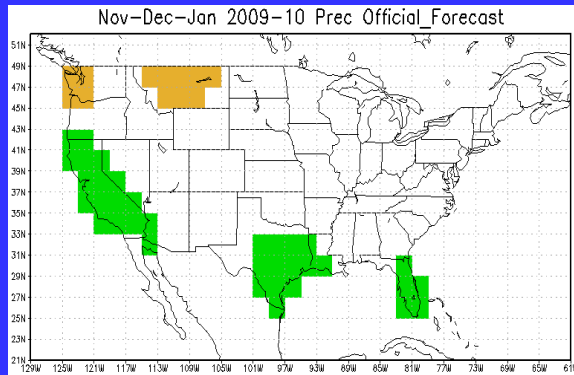
# CPC Seasonal Climate Outlook Versus Observed

Dec-Jan-Feb

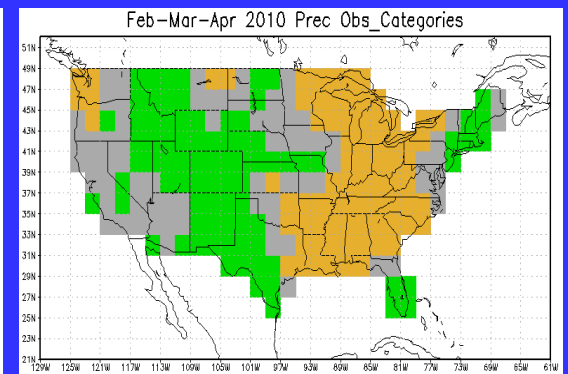
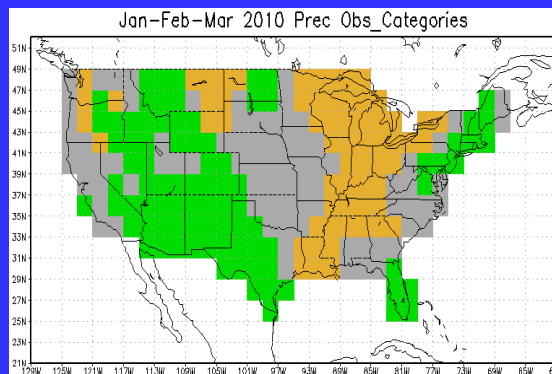
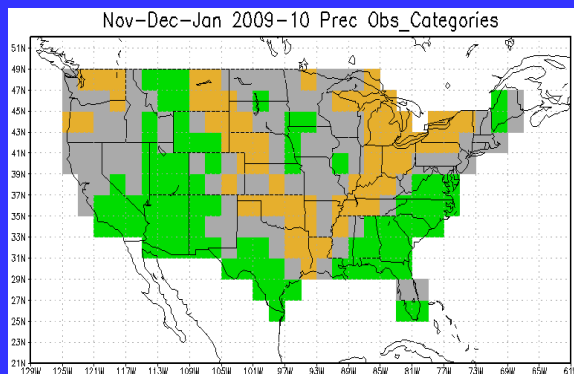
Jan-Feb-Mar

Feb-Mar-Apr

Predicted

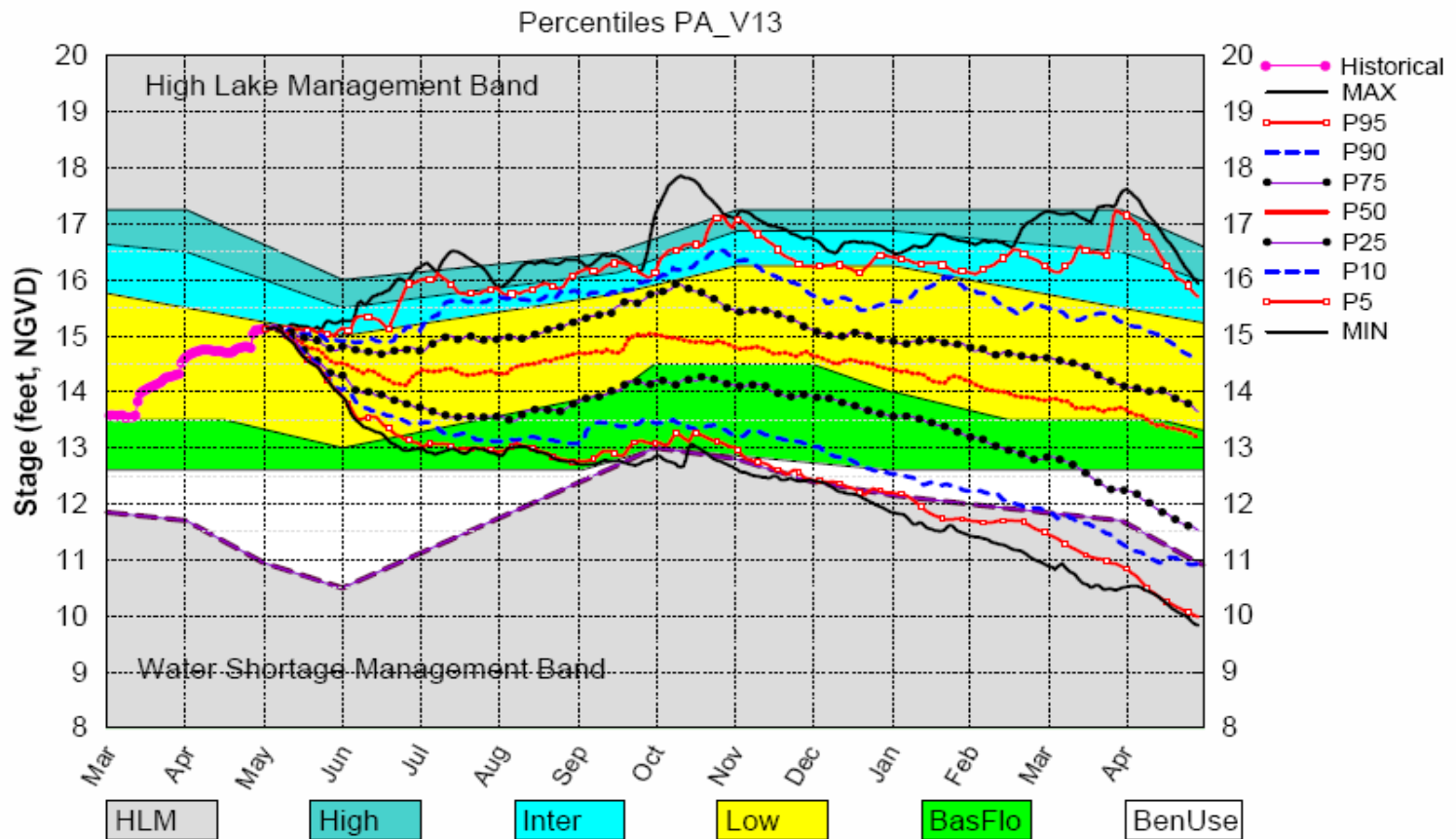


Observed



# Position Analysis (PA) Percentiles

## Lake Okeechobee SFWMM May 2010 Position Analysis



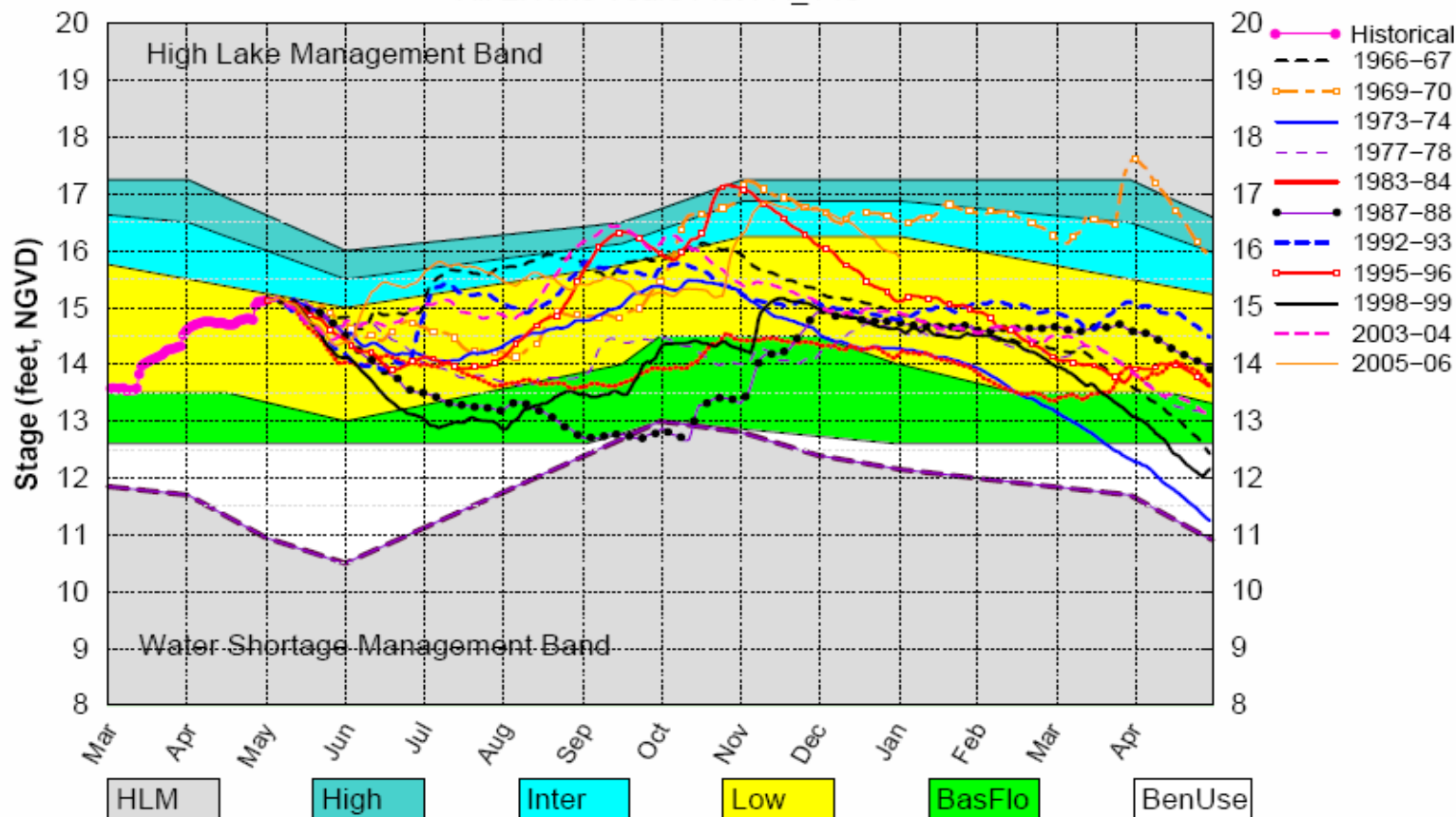
(See assumptions on the Position Analysis Results website)



# Position Analysis (PA) for El Nino years

## Lake Okeechobee SFWMM May 2010 Position Analysis

All El Nino Years Plot PA\_V13



(See assumptions on the Position Analysis Results website)

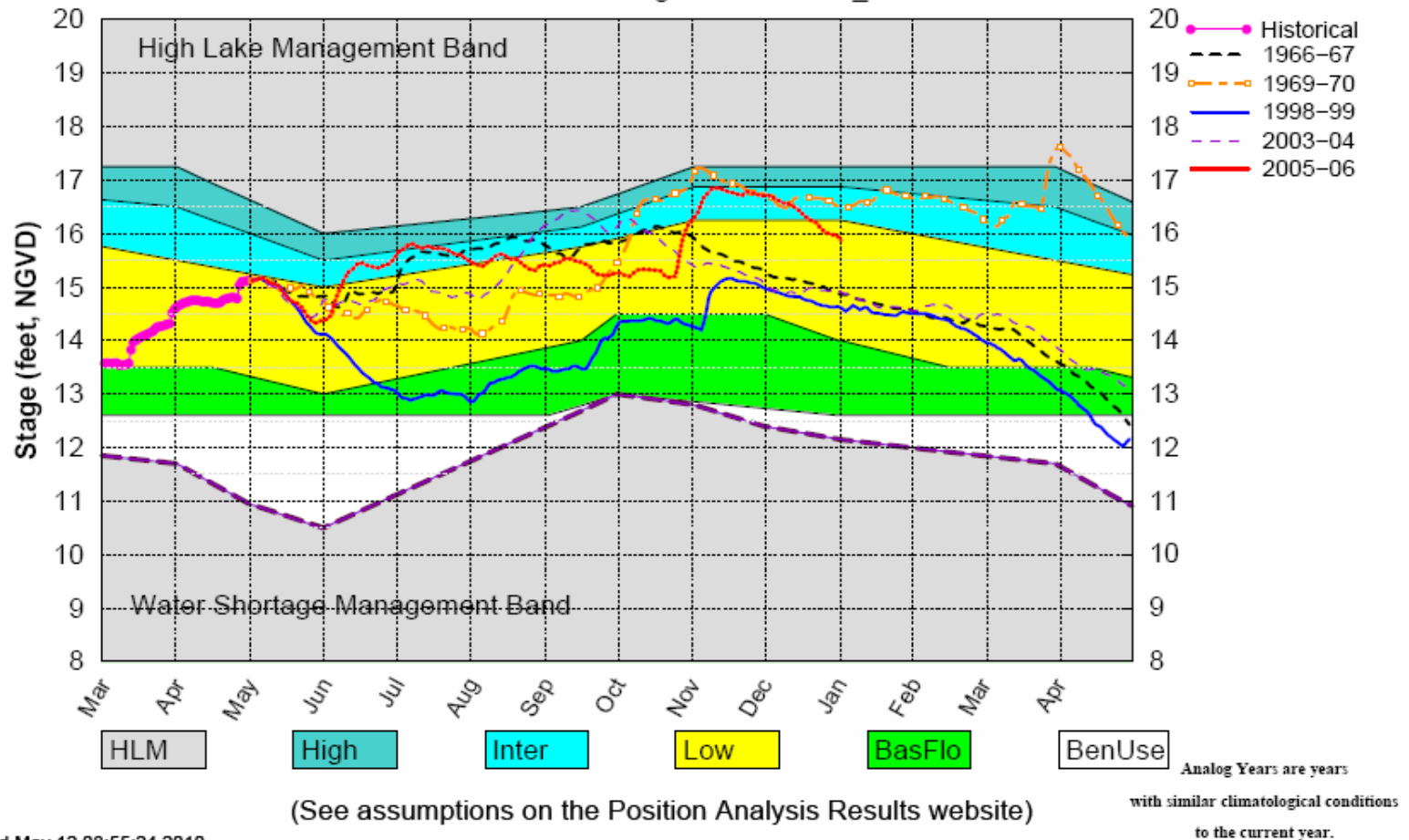
Wed May 12 08:55:23 2010



# Update Position Analysis (PA) for AMO Warm/El Nino Years

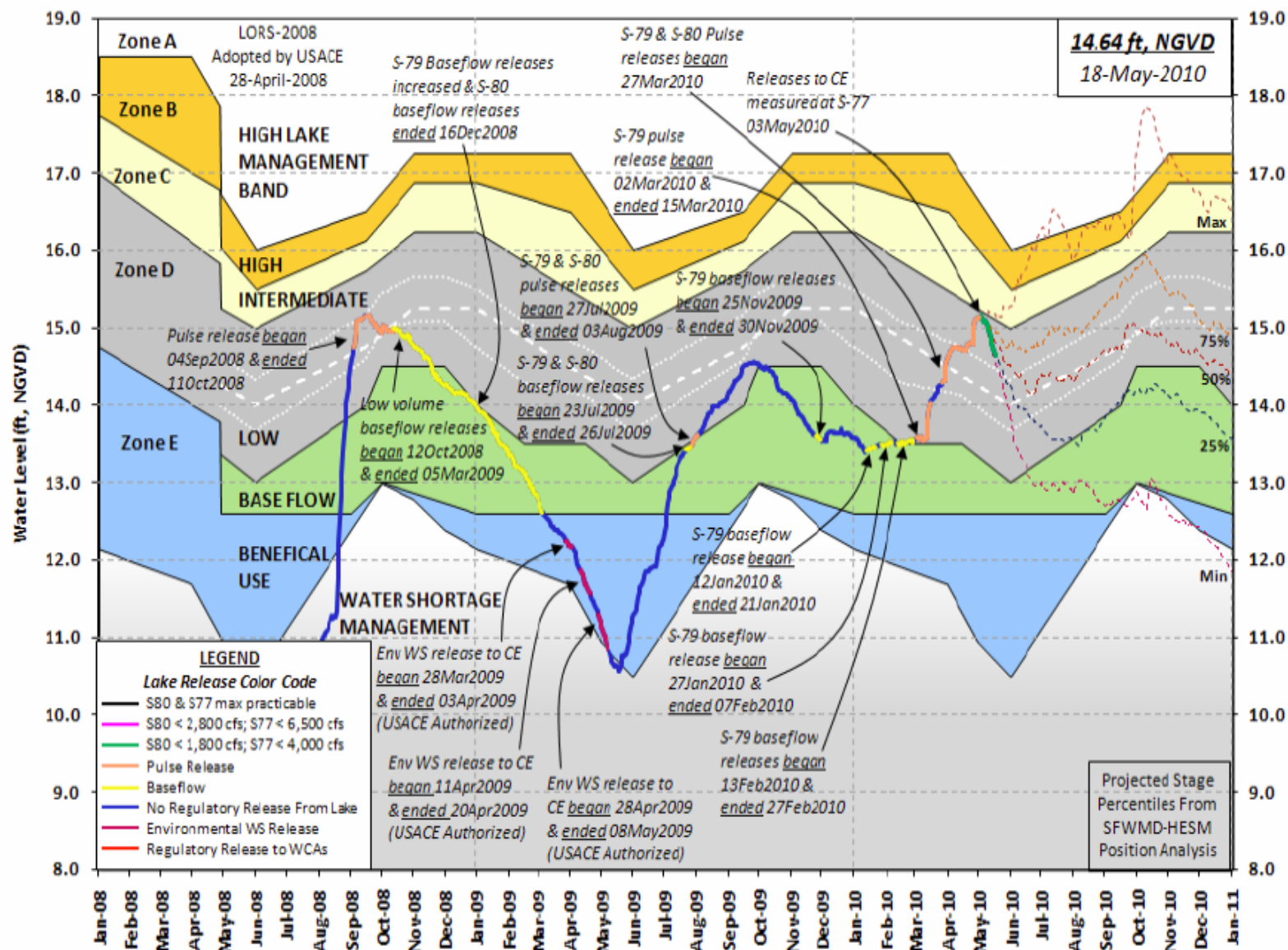
## Lake Okeechobee SFWMM May 2010 Position Analysis

AMO Warm / El Nino Analog Years Plot PA\_V13



Wed May 12 08:55:24 2010

# Lake Okeechobee Water Level History and Projected Stages



# 2008 LORS

## Part D: Establish Allowable Lake Okeechobee Releases to Tide (Estuaries)

Note: This operational guidance provides essential supplementary information to be used in conjunction with other supporting documentation including text within the Water Control Plan.

When conducting Base Flow releases, flows can be distributed East and West up to 650 cfs as needed to minimize impacts or provide benefits through S-80 and S-79

Apply Meteorological Forecasts on a Weekly Basis; apply Seasonal and Multi-Seasonal Climate/Hydrologic Outlooks on a Monthly Basis

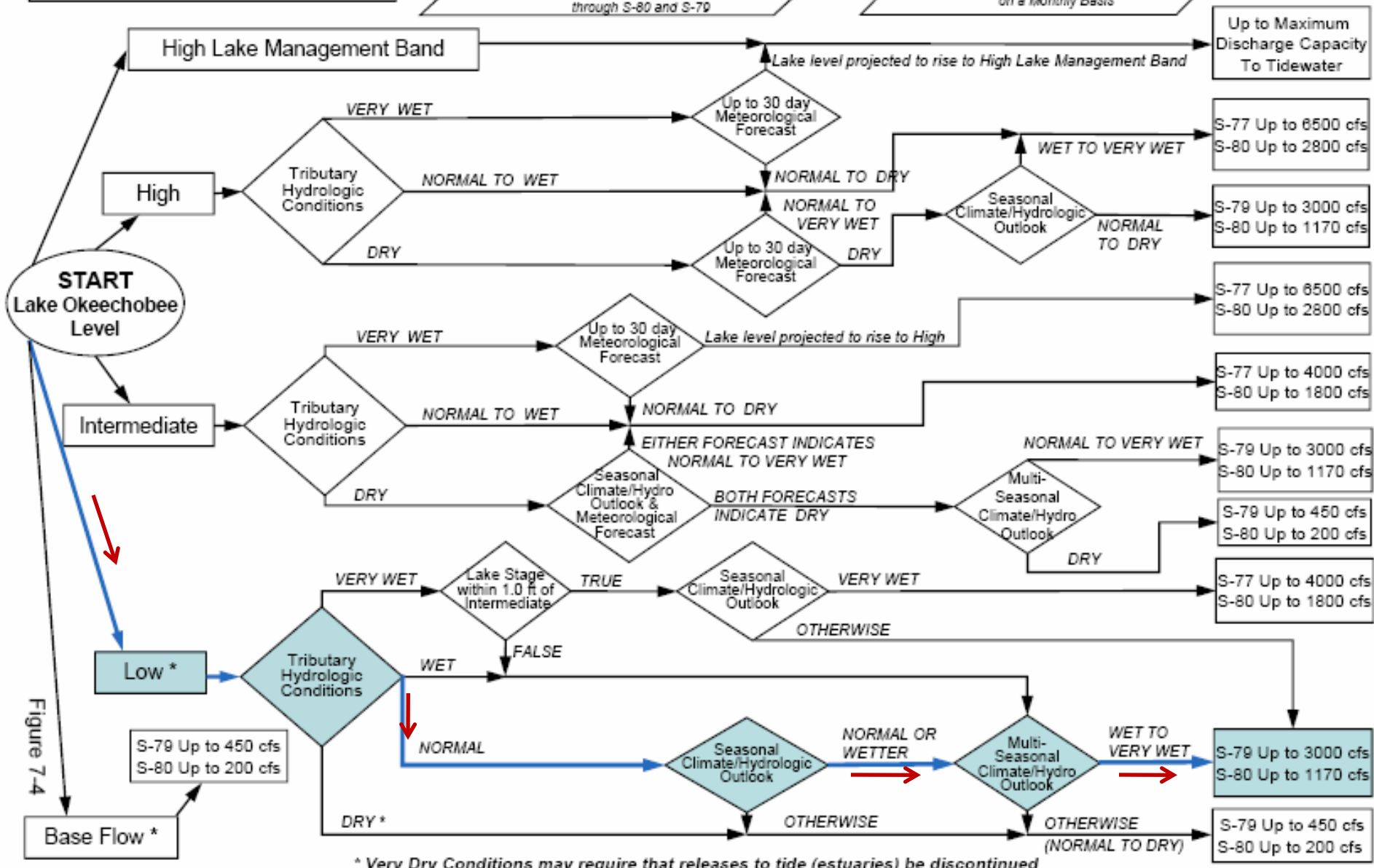


Figure 7-4

# 2008 LORS

## Part C: Establish Allowable Lake Okeechobee Releases to the Water Conservation Areas

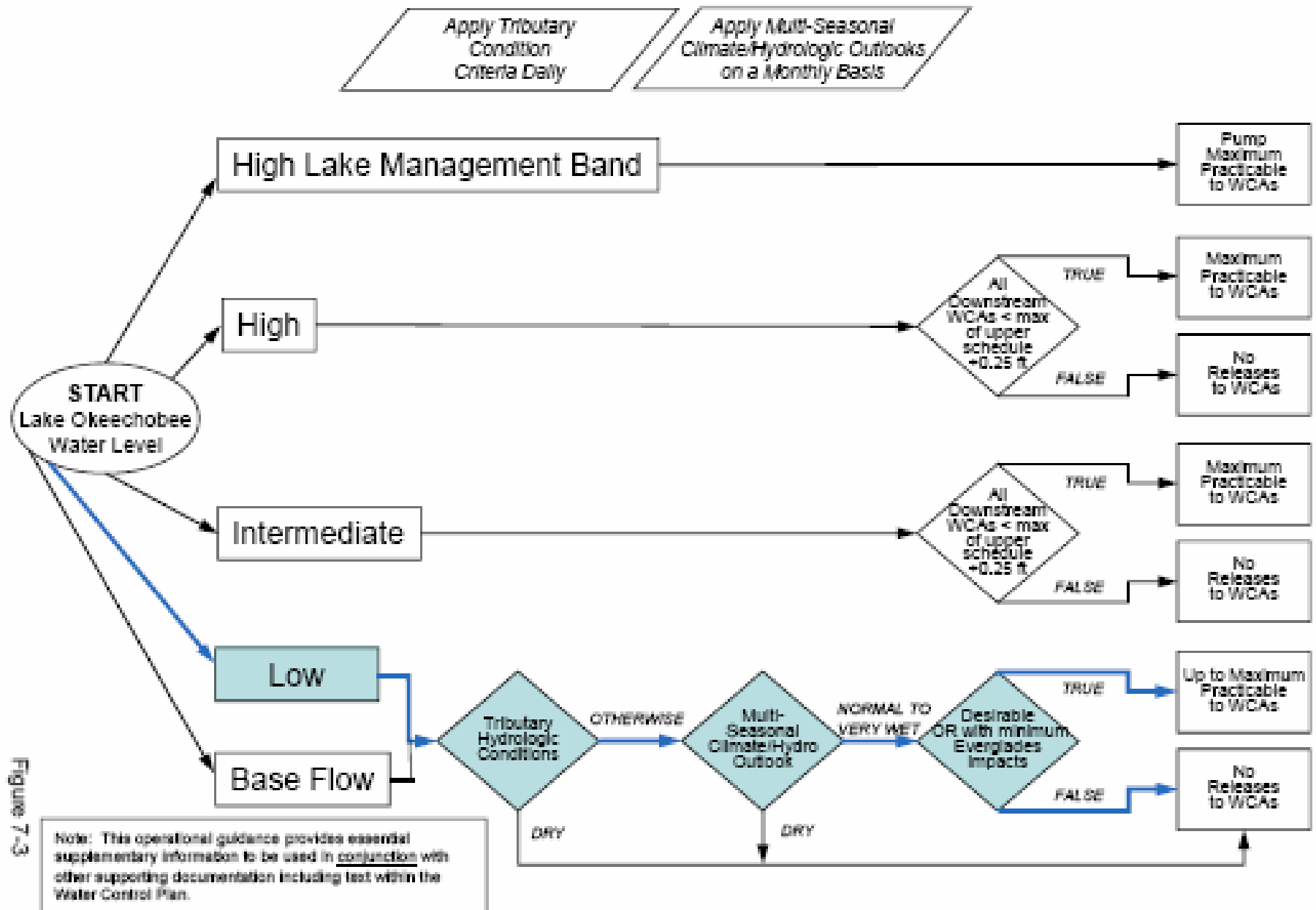
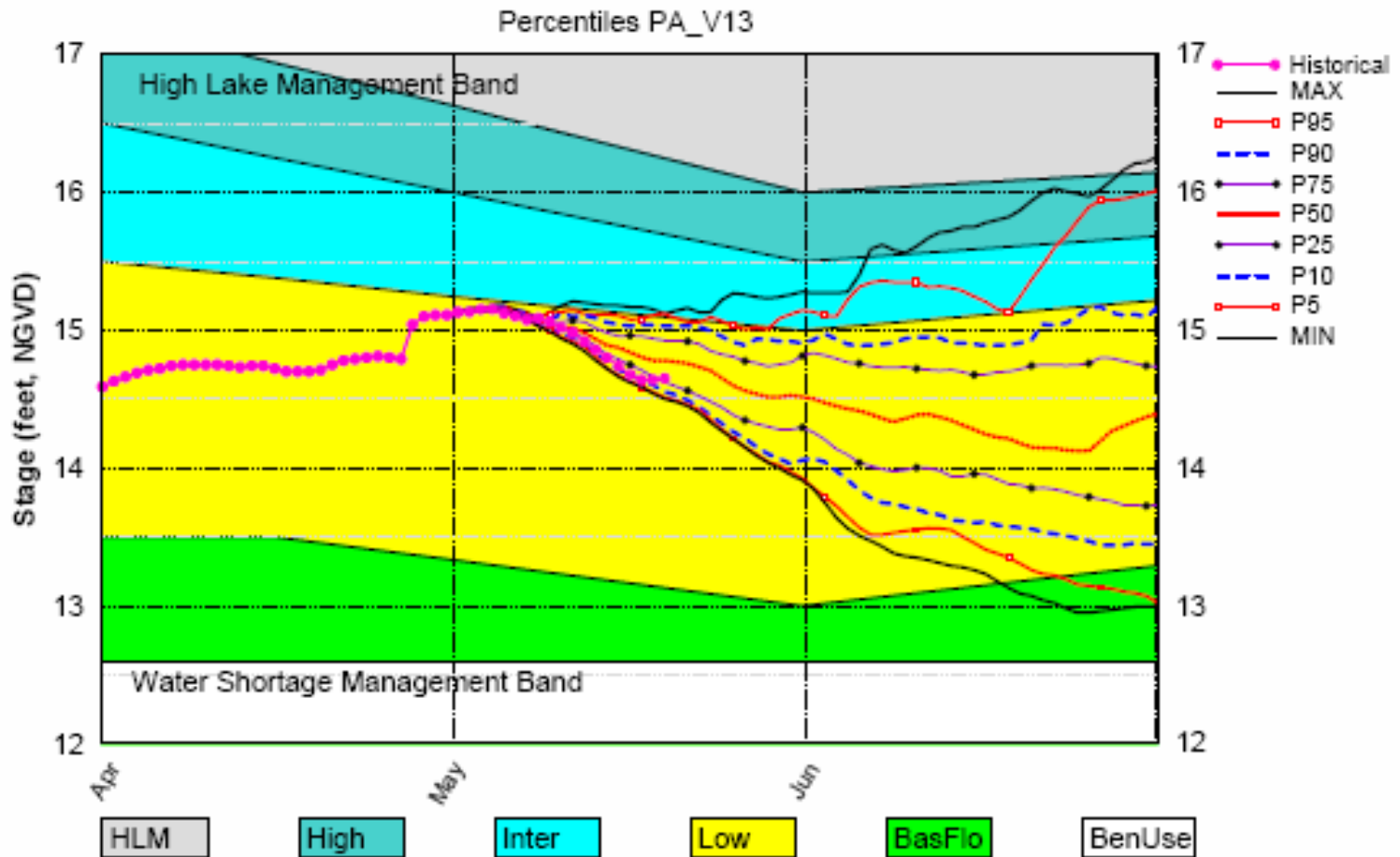


Figure 7-3

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.29	
Operational Band	High sub-band	15.73	
	Intermediate sub-band	15.11	
	Low sub-band	13.15	← 14.64
Base Flow sub-band		12.60	
Beneficial Use sub-band		10.69	
Water Shortage Management Band			

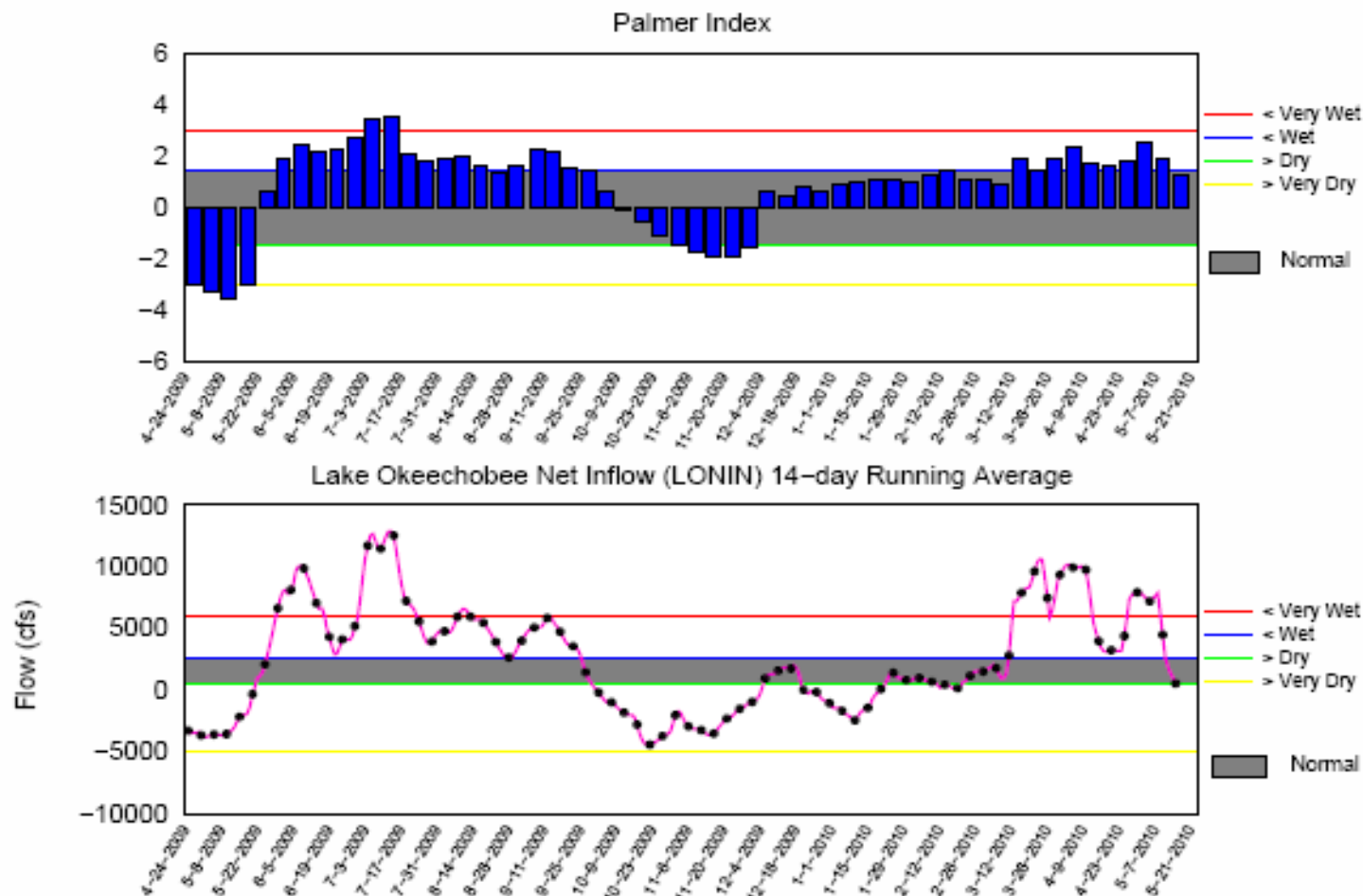


# Lake Okeechobee SFWMM May 2010 Position Analysis



(See assumptions on the Position Analysis Results website)

## Tributary Basin Condition Indicators as of May 17 2010



Tue May 18 11:59:17 EDT 2010

Table of the Lake Okeechobee Net Inflow Outlooks in feet of equivalent depth. All methods are updated on a weekly basis with observed net inflow for the current month.

Season	Croley's Method <sup>1</sup>		SFWMD Empirical Method <sup>2</sup>		Sub-sampling of El Nino ENSO Years <sup>3</sup>		Sub-sampling of AMO Warm + El Nino ENSO Years <sup>4</sup>	
	Value (ft)	<a href="#">Condition</a>	Value (ft)	<a href="#">Condition</a>	Value (ft)	<a href="#">Condition</a>	Value (ft)	<a href="#">Condition</a>
Current (May-Oct)	2.66	Very Wet	2.28	Very Wet	2.42	Very Wet	3.99	Very Wet
Multi Seasonal (May-Apr)	3.12	Wet	2.75	Wet	4.15	Wet	6.32	Very Wet

See [Seasonal](#) and [Multi-Seasonal](#) tables for the classification of Lake Okeechobee Outlooks.